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Examiner: Jason Y. Pahng
Group Art Unit: 3725

REMARKS

First, in accordance with the Examiner's instructions for the allowance of claims 19 and 24, claims 19 and 24 have each been rewritten in independent form as new claims 25 and 26 respectively, each new independent claim including all of the limitations of the base claim 18 and any intervening claims, the subject matter of claim 19 being incorporated into claim 25 in d), and subject matter of claim 24 being included in claim 26 in b). Claims 19 and 24 have been cancelled accordingly. It is therefore understood that, the Examiner having found the subject matter of claims 19 and 24 allowable, the new independent claims 25 and 26 are now in proper condition for allowance in accordance with the Examiner's instruction.

Also, independent claim 18 is amended herein to now additionally include and recite all of the limitations and structural requirements contained in claim 20 which is now in turn cancelled herein. Claim 18 is also additionally amended herein to more clearly recite and emphasize the required longitudinally forward movement of the outfeed end of the conveyor into registry with the hollow interior confines of the longitudinally rearwardly extending ring members, as will be discussed in the following remarks concerning the reference Suverkrop. Claim 21 is amended to depend on now amended claim 18 which recites the subject matter of former claim 20 in independent form. Claim 22 remains dependent on claim 21 and claim 23 now limits the subject matter of now amended independent claim 18, formerly the subject

matter of claim 20.

In the Final Office action, claims 20 and 21 were rejected by applying the reference Suverkrop to the combination (Greist, Branscome and Walters, et al.) applied in the rejection of former claim 18, the Examiner commenting, "Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greist in view of Branscome and Walters, et al. as applied above, further in view of Suverkrop. Claim 20 calls for a feed conveyor, with infeed and outfeed ends, supported on the base frame for longitudinal movement. In a closely related art pertinent to the problem, Suverkrop discloses feed conveyor (32) with an infeed (P1) and outfeed ends (P2, P3) supported on a base frame (30) in order to feed material to be processed (Fig. 2). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide Greist with a feed conveyor supported on a base frame in order to feed material to be processed, as taught by Suverkrop."

However, it is respectfully submitted that the Examiner's analysis of the reference Suverkrop is in error, and in fact the teachings of Suverkrop completely fail to suggest any structural modification which meets the recited and required structural arrangements of former claim 20, now contained in amended independent claim 18. Specifically, Suverkrop does not teach a feed conveyor arrangement as applicant has taught and claims, but rather teaches a high speed skip hoist system 10. In this, in the Examiner's comments in the Final rejection of claim 20, the Examiner identifies that Suverkrop "discloses feed conveyor

(32), . . ." In fact however, Suverkrop discloses 32 as a pair of laterally spaced apart longitudinally elongated lever lift arms 32 secured at one of their longitudinal ends by pivot pin members 42 to the base frame 30 for pivoting, vertically arcuate movement of the opposite terminal ends of the lift arms 32 which in turn mount a simple, open-ended bucket 24 (col. 5, lines 28-60). Absent the bucket 24, Suverkrop's lift arms 32 are utterly functionless, meaningless structures.

Additionally, with regard to the Examiner's analysis of the structure of Suverkrop quoted above, the Examiner further identifies "feed conveyor" (32) as having "an infeed (P1) and outfeed ends (P2, P3). . .". However, contrary to the Examiner's analysis, Suverkrop clearly identifies P1, P2 and P3 as selected positions of vertical, arcuate movement of the bucket 24, with P1 indicating a lowered, bucket filling position, P2 representing an elevated, second position, and P3 indicating a third, bucket-emptying, elevated position in which the bucket 24 is physically rotated on the support lift arms 32, whereupon the contents of the bucket free fall, en masse, by gravity vertically downwardly from the upended bucket (col. 5, lines 25-60). Thus, contrary to the Examiner's comments there are no "infeed and outfeed ends", since material is loaded into the bucket through the same open top and that the material is dumped.

Also, in connection with the Final rejection of claim 21, the Examiner comments, "With regard to claim 21, Suverkrop's feed conveyor includes a feed hopper (24) supported

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on the base frame." As discussed previously, Suverkrop identifies 24 as the load lift bucket pivotally mounted on the outer terminal ends of the lift arms 32. As discussed before, this is the essential load lift structure of the lift arm 32 structure of the hoist system 10. In fact, Suverkrop's skip bucket loader apparatus is disclosed as being arranged to dump material contained in the bucket 24 into the open top end of a collection hopper 16 disposed vertically below the tilted bucket 24 in its elevated position P3 for emptying. Thus, Suverkrop's only hopper 16 is specifically arranged for communication with the outfeed of the hoist 10. However, claim 21 recites the tumbling apparatus of claim 18 including a feed hopper supported on the base frame for communication with the infeed end of said feed conveyor, and thus Suverkrop fails to meet or suggest the recited structural requirements of the claim.

Accordingly, from the foregoing, it is submitted that Suverkrop clearly does not disclose or suggest any feed conveyor arrangement having infeed and outfeed ends, nor one supported on the base frame for longitudinally forward movement of its outfeed end into registry with the interior of said longitudinally rearwardly extending hollow ring members and said central opening of the drum for conveying raw material therethrough and into the drum cavity during rotation of the drum and for reverse longitudinal movement of the outfeed end out of registry with the interior of the hollow ring members for discharge of tumbled material from the tumbling apparatus, as is now specifically recited in now-amended claim 18. In fact, Suverkrop merely teaches a lift bucket arrangement for lifting materials to a vertically elevated

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position and dumping them vertically downwardly by gravity downwardly into the top, open end of a receiving collection hopper that is neither rotating nor tilting, as is required of the tumbling drum of the primary reference Greist and indeed the applicant's tumbling drum structure as recited in the claims. Nevertheless, for clarity and to emphasize the aforementioned structural requirements of applicant's feed conveyor apparatus, the subject matter of claim 20 now contained in amended claim 18 further includes recitation of the longitudinally forward movement of the outfeed end of the conveyor into registry with the interior of the longitudinally rearwardly extending hollow ring members, as has been disclosed, and is clearly shown in the applicant's Figs. 1 and 2. This clearly and unmistakably distinguishes the claimed structure over the scope and capabilities of Suverkrop's vertically dumping lift bucket apparatus and its capabilities.

From the foregoing it is submitted that the Final rejection of claims 20 and 21 as discussed above are in error and based on an incorrect comparison of the structural and functional teachings of Suverkrop with the claimed structure, particularly as is now specifically recited in amended claims 18 and 21. Accordingly, withdrawal of the Final rejections and reconsideration of now amended claim 18 and claim 21 and allowance of those claims is therefore respectfully solicited.

With regard to the rejection of claims 22 and 23, as has been discussed hereinbefore

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in connection with the rejection of now amended claim 18 and claim 21, since the Suverkrop reference cannot assist the combination of Greist, Branscome and Walters in its failure to render the claimed invention including the specifically recited feed conveyor apparatus and, in claim 21, the hopper apparatus associated with the infeed end thereof, Kuhmonen's teachings of providing a base frame mounted on a mobile transport vehicle in order to provide transportability of the tumbling drum apparatus does not serve to assist the basic failure of Suverkrop in its modification of the reference combination Greist in view of Branscome in view of Walters, et al. It is respectfully submitted that claim 22, dependent on the subject matter of dependent claim 21 is clearly allowable over the art applied, and claim 23, dependent on the subject matter of now amended claim 18 is also allowable over the rejections based on the combination of teachings including Suverkrop.

Finally, with regard to the Examiner's use of the reference Branscome in the Final rejection of the claims, the Examiner comments, "Greist discloses a rotation means for the drum, but does not recite that it is powered. Providing a powered means is an ordinary engineering design. In a closely related art, Branscome discloses a tumbling device with a powered drive means (42)." However, Branscome's electric motor 42 is specifically configured only to drivingly engage a set of drum-supporting drive wheels 40 cooperating with idler wheels 140, all fixed on a stationary support frame to support the drum for rotation in a single, fixed position of downward tilt only. It is this structural arrangement that is Branscome's

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powered drum rotation means, and there is no structurally equivalent drum rotation structure in the reference Greist. Indeed, Greist teaches a tumbling drum supported on a rearwardly extending axial support shaft by which both tilting movement and continuous rotation of the tumbling drum on its opposite tilted positions is provided.

Clearly, the powered drum rotating drive wheel structure of Branscome structurally precludes the possibility of Greist's tumbling drum to be tilted from the lowered position of Fig. 1 to the upwardly raised, tilted, tumbling position of Fig. 2, because the upward tilting of Greist's drum on its rearwardly extending tilt support shaft structure necessarily results in the drum being lifted off of Branscome's base-mounted support drive wheels 40 being driven by Branscome's electric motor 42. Accordingly, with Greist's drum removed from the rotational drive means taught by Branscome, when in its upwardly tilted tumbling condition of Fig. 2, the drum would cease rotating.

Clearly, the proposed modification of Greist to utilize the powered drum rotating means of Branscome would necessarily result in a modification of Greist that would not provide rotation of the drum in its disclosed tumbling condition. Such modification impermissibly destroys the disclosed, intended and primary functioning of the primary reference as it was originally disclosed. Accordingly, it is respectfully submitted that the Final rejection of the claims based on the proposed modification of Greist by the teachings of Branscome are in error, and accordingly, the Final rejections should properly be withdrawn.

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From all the foregoing it is believed that the Examiner will agree that now amended claim 18, along with claims 21-23 are now in condition for allowance over the combination of references cited in the Final rejections, and therefore reconsideration and withdrawal of the Final rejections and allowance of the pending claims along with new claims 25 and 26, presented in accordance with the Examiner's instructions for the allowance of former claims 19 and 24, is respectfully solicited.


Respectfully submitted,

OLSON & OLSON



MARK D. OLSON
Agent for Applicant
Reg. No. 31,186
5412 S.E. Foster Road
Portland, Oregon 97206
Phone: (503) 222-1321
Fax: (503) 274-7747
email: patpend@teleport.com

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